

Fluctuating hormones can affect women's sleep

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Credit: Yale University

As women, we know that hormones can wreak havoc on our moods and appetites, but did you know that they can also play a huge role in how many zzz's we catch each night? "Insomnia is much more common in women than men," says Yale Medicine sleep specialist Christine Won, MD. "This can be caused by a variety of reasons, including psychological, social, and physiological."

Meet Your Hormones

Your body has 50 hormones, each of which does important work jump-starting or stopping certain biological functions; the two major female hormones are estrogen and [progesterone](#). Estrogen, the main female sex hormone, helps control the monthly menstruation cycle. It's produced in a woman's eggs, adrenal glands and fat tissue. There are three types of estrogen: estradiol (prevalent in childbearing women, estriol (the estrogen produced during pregnancy), and estrone (the estrogen produced after menopause).

Progesterone, estrogen's cousin, is the hormone that helps maintain pregnancy. It is produced in a woman's eggs, adrenal glands and placenta (when a woman is pregnant). Known as the "relaxing hormone," progesterone has a mildly sedative effect.

These two major female hormones shift up and down throughout a woman's life, affecting sleep along the way. Here are some major ways:

Menstruation

Most girls begin menstruating between the ages of 10 and 15, launching a life-long cycle of hormonal fluctuations that can affect sleep. In fact, research shows that not until puberty do sleep differences between boys and girls appear.

In the week before her period, a woman's progesterone levels will rise to prepare her body for a potential pregnancy. If there is no pregnancy, progesterone levels decrease dramatically, causing the uterine lining to shed and starting the menstrual cycle. Immediately before bleeding begins, a woman's progesterone levels dip dramatically, which is why some women can find it really difficult to get quality sleep in those

"PMS" days. After menses, progesterone levels will slowly rise again, allowing sweet dreams to come more easily.

Women with polycystic ovary syndrome (PCOS) can have irregular periods, higher levels of testosterone and lower levels of progesterone. These irregularities in hormones can exacerbate [sleep difficulties](#). Additionally, studies show that women with PCOS have a higher risk of developing sleep apnea—a sleep disorder that causes a person to stop breathing for brief periods throughout the night.

Tips: If you're finding that you're running a sleep debt in the days before your period starts, make daily exercise a priority. This ensures that you'll be tired by bedtime. Also, wind down a bit earlier to give yourself a bit more time to rest, and avoid nicotine and caffeine.

Pregnancy

The nine months of pregnancy can be a quagmire of wayward hormones, as both progesterone and estrogen swirl through your body to support the growing fetus. During the first trimester, progesterone levels rise exponentially to help keep the uterus muscle relaxed and help boost the body's immune system. Estrogen levels also skyrocket in the first trimester: A woman produces more estrogen during one pregnancy than throughout the entire rest of her life. This may be the reason women report feeling drowsy and taking more naps in the first 12 weeks of pregnancy. By the third trimester, progesterone and [estrogen levels](#) even out. But by then, other factors, like frequent urination, restless leg syndrome, and difficulty breathing, can make it hard to get a solid night's sleep.

Tips: There isn't much you can do about your fluctuating hormones and changing body during pregnancy, but Dr. Won recommends sleeping with your head elevated. This helps reduce pregnancy-related reflux and

snoring, both of which may be making you wake up at night. She also recommends exploring cognitive and behavioral therapies, and relaxation techniques to wind down.

Menopause

As a woman nears menopause, her [hormone](#) levels fluctuate dramatically, causing night sweats and hot flashes, which can wake the brain during sleep. In addition, lower levels of progesterone make some women irritable and less able to relax.

Research also suggests that progesterone and estrogen may protect women against sleep apnea, but menopause cancels out that benefit. Older women are just as likely to develop sleep apnea as are men; if you have this condition, oxygen deprivation may cause you to awaken several times during the night. Other sleep disorders also become more common with menopause—studies have found that women spend less time in rapid eye movement (REM) sleep and when they wake up, they feel less well rested.

During this phase of life, hormones aren't the only things disrupting your ability to get a good night's sleep. "It's not as black and white as hormones decrease so sleep decreases," says Lubna Pal, MD, an endocrinologist at Yale Medicine. The symptoms of menopause, including hot flashes and night sweats, may underlie many of the sleep problems that peri- and early menopausal women commonly encounter, she explains. For [women](#) facing these challenges, [estrogen replacement therapy](#) may help them to sleep more soundly.

Tips: Try incorporating soy-rich foods, which are high in phytoestrogen (a chemical that mimics the effect of [estrogen](#) in your body), into your diet. Avoid eating spicy food and other potential triggers for [hot flashes](#). Wear lightweight clothing to bed.

Tips for getting a better night's rest

- Go to bed and wake up at the same time every day so that you can set your circadian rhythm.
- Get a bright dose of sunshine in the morning and in the middle of the day and keep the lights dim at night.
- Avoid eating two to three hours prior to bedtime.

Provided by Yale University

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